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Studies of Neotropical Caddis Flies, V

Types of the Species Described by Banks and Hagen

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Nathan Banks, who described his first Neotropical species in 1900 and his last in 1941, was one of the most prolific workers on Latin American Trichoptera. He described 94 species from South and Central America, Mexico, and the West Indies in 13 publications. Unfortunately, like many other workers of his time, he frequently did not figure the genitalia, and, when he did, he did not clear and relax this structure before preparing his figures. Thus, our attempts to recognize many of his species have been handicapped severely. Essentially the same situation exists with Hagen's six Neotropical species.

Very fortunately for North American workers, the types of all these species, save one, are located in the Museum of Comparative Zoology at Harvard University. I have been able to study all of this material and to make notes and sketches of the genitalia for most species. Although Banks very rarely possessed mixed type series, I am designating lectotypes in this paper for all species for which a syntypic series exists. Herein are given, with a few exceptions,

either figures of the genitalia of the types or specimens compared to the types, or a reference to published illustrations of the same, and photographs of the wings of certain species. The genera and species are listed in alphabetical order within the families, which are arranged in the order adopted by Ross (1944). The most detailed treatment is given under the combination, which in my estimation is correct. If the species was described originally in a different genus or is a synonym, it is listed in the original combination, together with the combination adopted in the present paper, directly under the generic heading.

I wish to express my sincere appreciation to Dr. P. J. Darlington and to Dr. H. E. Evans for their wholehearted cooperation during my visits to the Museum of Comparative Zoology.

Rhyacophilidae

Genus *Atopsyche* Banks

Atopsyche batesi Banks

Atopsyche batesi Banks, 1938, p. 304.—Ross and King, 1952, p. 198.—Fischer, 1960, p. 161.

Lectotype, male: "Haiti 1934 M.Bates," "La Visite & vic. La Selle Range 5–7000 ft. Sept. 16–23," "M.C.Z.Type 22105," "A. batesi".

Ross and King (1952) have presented figures of the male genitalia of this species.

Atopsyche bolivari Banks

Atopsyche bolivari Banks, 1924, p. 443.—Ross and King, 1952, p. 195.—Fischer, 1960, p. 161.

Lectotype, male: "Monte Socorro Colombia, 3800m.," "Fassl Coll," "N.Banks," "Type 14839," "Atopsyche bolivari Bks. Type."

Ross and King (1952) also have illustrated the genitalia of this specimen.

Atopsyche mexicana (Banks)

Philopotamus mexicanus Banks, 1901, p. 370.—Ulmer, 1905b, p. 68; 1907b, p. 197; 1913, p. 405.—Betten, 1934, p. 168.—Fischer, 1961, p. 15.
Atopsyche mexicana (Banks).—Ross, 1953, p. 293.

The holotype, from Mexico, is without abdomen and so can not now be identified specifically.

Genus *Dolochorema* Banks

Dolochorema irregularis Banks

Dolochorema irregularis Banks, 1913b, p. 240.—Ross, 1956a, p. 125.—Fischer, 1960, p. 160.

Ross (1956a) has given full figures of the genitalia and wings of the holotype male from Peru.

Genus *Rhyacophila* Pictet

Rhyacophila mexicana Banks: See *Chimarra mexicana* (Banks).

Philopotamidae

Genus *Chimarra* Stephens

Chimarra (*Curgia*) *banksi* (Ulmer), new combination

Figures 1–3

Wormaldia mediana Banks, 1905, p. 18. [Preoccupied.]
Wormaldia banksi Ulmer, 1907b, p. 198; 1913, p. 405.—Navas, 1924, p. 75.—Betten, 1934, p. 170.—Fischer, 1961, p. 32.

The genitalia of the holotype male from Nicaragua are shown in figures 1–3.

Chimarra (*Chimarra*) *bicolor* (Banks), new combination

Figures 13–15

Philopotamus bicolor Banks, 1901, p. 370.—Ulmer, 1905b, p. 68; 1907b, p. 197; 1913, p. 405.—Betten, 1934, p. 168.—Fischer, 1961, p. 6.
Chimarra xesta Denning, 1952, p. 17. [New synonymy.]

Figures 13–15 were prepared from a topotype that is identical with the holotype, male. Denning's *xesta* is clearly a synonym and is also topotypic.

Chimarra (*Curgia*) *mexicana* (Banks), new combination

Figures 4–7

Rhyacophila mexicana Banks, 1900, p. 259.—Ulmer, 1907b, p. 210.—Betten, 1934, p. 135.—Fischer, 1960, p. 104.
Philopotamus barrettae Banks, 1900, p. 259; 1901, p. 370.—Ulmer, 1905b, p. 68; 1907b, p. 197; 1913, p. 386, 405.—Betten, 1934, p. 168.—Fischer, 1961, p. 6. [New synonymy.]
Wormaldia mexicana Ulmer, 1905c, p. 89. [New synonymy.]
Chimarrha mexicana (Ulmer).—Ulmer, 1907b, p. 200; 1913, p. 405.—Betten, 1934, p. 176.
Chimarra mexicana (Ulmer).—Fischer, 1961, p. 66.—Flint, 1966, p. 3.

Figures 5–7 were prepared from the holotype male from Mexico. The holotype of *barrettae* (fig. 4) is a female of this species. Although

barrettae has line priority, I as first revisior, give *mexicana* precedence because its holotype is a male. Although the lectotype of *mexicana* (Ulmer) is without abdomen, the coloration and original figures of the male genitalia indicate that this too is a synonym.

Chimarra (*Chimarra*) *moesta* (Banks)

FIGURE 16

Chimarrha (*Curgia*) *moesta* Banks, 1924, p. 449.—Betten, 1934, p. 176.
Chimarra moesta (Banks).—Fischer, 1961, p. 67.

The holotype, female, of this Cuban species is shown in figure 16.

Chimarra (*Curgia*) *persimilis* (Banks)

FIGURES 11, 12

Chimarrha persimilis Banks, 1920, p. 360.—Lestage, 1925, p. 37.
Chimarra persimilis (Banks).—Fischer, 1961, p. 68.

Lectotype, male: "Quevedo W. Ecuador," "N. Banks," "Type 10907," "Chimarrha persimilis Bks. Type."

The lectotype is illustrated in figures 11 and 12.

Chimarra (*Curgia*) *pulchra* (Hagen)

FIGURES 8–10

Chimarrha pulchra Hagen, 1861, p. 298; 1864, p. 809.—Kolbe, 1888, pp. 167, 175.—Ulmer, 1905b, p. 69; 1907b, p. 200; 1909, p. 127; 1913, p. 405.—Betten, 1934, p. 176.—Ross 1952, p. 32.
Chimarrha (*Curgia*) *fraterna* Banks, 1924, p. 449.—Betten, 1934, p. 176. [New synonymy.]
Chimarra pulchra (Hagen).—Fischer, 1961, p. 69.
Chimarra fraterna (Banks).—Fischer, 1961, p. 60.

Ross designated the lectotype of *pulchra;* I designate here the lectotype, male, of *fraterna:* "Cuba Ch. Wright," "Type 14876."

The extent of golden hairs on the forewings is somewhat variable. The lectotype of *fraterna* has the patch somewhat divided; otherwise, it is identical to *pulchra.*

A male of this common Cuban species is illustrated in figures 8–10.

Chimarra (*Curgia*?) *pumila* (Banks)

FIGURE 17

Chimarrha pumila Banks, 1920, p. 359.—Lestage, 1925a, p. 37.
Chimarra pumila (Banks).—Fischer, 1961, p. 69.

Lectotype, female: "Quevedo W. Ecuador," "N. Banks," "Type 10908," "Chimarrha pumila Bks. Type."

The female lectotype is illustrated (fig. 17) herein. It is probably the female of *C. persimilis* Banks.

Genus *Chimarrha* Burmeister

Chimarrha fraterna Banks: See *Chimarra pulchra* (Hagen).
Chimarrha moesta Banks: See *Chimarra moesta* (Banks).
Chimarrha persimilis Banks: See *Chimarra persimilis* (Banks).
Chimarrha pulchra Hagen: See *Chimarra pulchra* (Hagen).
Chimarrha pumila Banks: See *Chimarra pumila* (Banks).

Genus *Philopotamus* Stephens

Philopotamus barrettae Banks: See *Chimarra mexicana* (Banks).
Philopotamus bicolor Banks: See *Chimarra bicolor* (Banks).
Philopotamus mexicanus Banks: See *Atopsyche mexicana* (Banks).

Genus *Wormaldia* McLachlan

Wormaldia mediana Banks: See *Chimarra banksi* (Ulmer).

Psychomyiidae

Genus *Antillopsyche* Banks

Antillopsyche wrighti Banks

Figure 18

Antillopsyche wrighti Banks, 1941, p. 400.

Lectotype, male: "Soledad Santa Clara Prov. 1–8–VI," "Cuba 1939 C. T. Parsons," "M.C.Z. Type 25294," "Antillopsyche wrighti Bks. Type."

The male lectotype is illustrated in figure 18. The genus is distinct and close to *Pseudoneureclipsis* Ulmer (see Flint, 1964, p. 29).

Genus *Cordillopsyche* Banks

Cordillopsyche costalis Banks: See *Polyplectropus costalis* (Banks).

Genus *Cyrnellus* Banks

Cyrnellus minimus Banks

Figures 19, 20

Cyrnellus minimus Banks, 1913a, p. 88.—Lestage, 1925b, p. 105.—Fischer, 1962, p. 143.

Lectotype, male: "type," "Camp 41; 360 Km from Porto Velho Brazil, Mann," "Type 11806," "Cyrnellus minimus Bks. Type."

The male lectotype is shown in figures 19 and 20.

Genus *Polycentropus* Curtis

Polycentropus colombiensis Banks

FIGURE 25

Polycentropus colombiensis Banks, 1910, p. 160.—Ulmer, 1913, p. 406.—Lestage, 1925b, p. 109.—Fischer, 1962, p. 67.

The female holotype of this species, from Colombia, is illustrated in figure 25.

Polycentropus domingensis Banks

FIGURE 21

Polycentropus domingensis Banks, 1941, p. 399.

Lectotype, male: "Loma Rucilla June '38 Dom. Rep. 5–10,000 ft. Darlington," "M.C.Z. Type 25,293," "Polycentropus domingensis Bks. Type."

The lectotype male is illustrated in figure 21.

Polycentropus insularis Banks

FIGURE 24

Polycentropus insularis Banks, 1938, p. 302.—Fischer, 1962, p. 83.

Lectotype, male: "Grenada: Grand Etang Sept. 1910 Allen & Brues," "M.C.Z. Type 22111," "Polycentropus insularis Bks. Type."

The genitalia of the lectotype are illustrated in figure 24.

Polycentropus mexicanus (Banks), new combination

FIGURE 23

Hydropsyche mexicana Banks, 1901, p. 369.—Ulmer, 1905b, p. 68; 1907b, p. 171; 1913, p. 406.—Betten, 1934, p. 193.—Fischer, 1963, p. 55.

The male holotype from Mexico is shown in figure 23.

Polycentropus nigriceps Banks

FIGURE 22

Polycentropus nigriceps Banks, 1938, p. 301.—Fischer, 1962, p. 90.

Lectotype, male: "Soledad, Cuba (Cienfuegos) Apr. 1936 Darlington," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22674," "Polycentropus nigriceps Bks. Type".

The male lectotype is shown in figure 22.

Genus *Polyplectropus* Ulmer

(Genus *Cordillopsyche* Banks, new synonymy)

The genus *Cordillopsyche* Banks (type-species *C. costalis* Banks) is clearly synonymous with *Polyplectropus* Ulmer (type-species *P.*

flavicornis Ulmer) on the basis of venation and general structure of the female genitalia.

Polyplectropus costalis (Banks), new combination

FIGURES 26, 27

Cordillopsyche costalis Banks, 1913b, p. 238.—Lestage, 1925b, p. 105.—Fischer, 1962, p. 95.

The genitalia of the female holotype of this Colombian species are shown in figures 26 and 27.

Genus *Xiphocentron* Brauer

Xiphocentron cubana (Banks)

Antillotrichia cubana Banks, 1941, p. 401.
Xiphocentron cubana (Banks).—Flint, 1964, p. 26.

The holotypic male has lost all parts of the genital capsule beyond the ninth segment. The parts remaining and the original drawing indicate that this is a typical species of *Xiphocentron*.

Xiphocentron haitiensis (Banks)

Antillotrichia haitiensis Banks, 1941, p. 402.
Xiphocentron haitiensis (Banks).—Flint, 1964, p. 26.

This species was described from a male holotype from Haiti. The genitalia were illustrated by Flint (1964).

HYDROPSYCHIDAE

Subfamily Macronematinae

Genus *Centromacronema* Ulmer

Centromacronema extensum Banks: See *Centromacronema auripenne* (Rambur).

Centromacronema auripenne (Rambur)

Macronema auripenne Rambur, 1842, p. 507.
Centromacronema auripeene (Rambur).—Ulmer, 1905b, p. 87.—Fischer, 1963, p. 202.
Centromacronema extensum Banks, 1913b, p. 238.—Betten, 1934, p. 203.—Fischer, 1963, p. 204. [New synonymy.]

I am not presenting a complete synonymy of *auripenne*; rather, one may consult the extensive bibliography in Fischer (1963).

The holotype of *extensum* seems to fall well within the extremes of the very variable *auripenne*.

***Centromacronema nigrifrons* Banks**

Centromacronema nigrifrons Banks, 1913b, p. 238.—Fischer, 1963, p. 204.

Although the holotype, male, from Colombia, shows no genitalic differences from *C. apicale* (Walker), I am not synonymizing it here because of the color differences pointed out in the original description.

Genus *Leptonema* Guerin

Leptonema externum Banks: See *Leptonema columbianum* Ulmer.
Leptonema guatemalum Banks: See *Leptonema albovirens* (Walker).

***Leptonema albovirens* (Walker)**

Macronema albovirens Walker, 1852, p. 76.
Leptonema albovirens (Walker).—Ulmer, 1905a, p. 31.—Fischer, 1963, p. 166.
Leptonema guatemalum Banks, 1913a, p. 89.—Mosely, 1933a, p. 65.—Betten, 1934, p. 202.—Fischer, 1963, p. 169. [New synonymy.]

A more extensive bibliography of *albovirens* and *columbianum* are given by Fischer (1963).

The holotype male of *guatemalum* is identical to the type of *albovirens*, as figured by Mosely.

***Leptonema columbianum* Ulmer**

Leptonema columbianum Ulmer, 1905a, p. 61.—Fischer, 1963, p. 168.
Leptonema externum Banks, 1913a, p. 87.—Mosely, 1933a, p. 13.—Fischer, 1963, p. 168.

The holotype, female, of *externum* agrees with *columbianum* in having 2 dark spots basally on the forewing, and expanded tibiae and tarsi of the midlegs.

***Leptonema insulanum* Banks**

Leptonema insulanum Banks, 1924, p. 455.—Mosely, 1933a, p. 66.—Betten, 1934, p. 202.—Fischer, 1963, p. 169.—Flint, 1964, p. 36.

This species, known from Puerto Rico only by the male holotype, is the senior synonym of *L. ulmeri* Mosely. I have a long series from Venezuela, which makes me suspect that the Puerto Rican specimen may be mislabelled.

***Leptonema poeyi* (Banks), new combination**

FIGURES 28–31

Macronema poeyi Banks, 1938, p. 299.—Fischer, 1963, p. 194.

Lectotype, male: "Coast below Pico Turquino June 26–30, '36," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22675," "Macronema poeyi Bks. Type."

This species, the lectotype of which is shown here (figs. 28–31), clearly belongs in *Leptonema*.

Genus *Macronema* Pictet

The taxonomic situation in this genus in the American tropics is, at best, extremely confusing. To add to the difficulty, many of the species are known only from a single specimen, often a female. The group of species near *hyalinum* Pictet (including *ulmeri* Banks and *erichsoni* Banks) seem to have distinctive color patterns but no obvious differences in the male genitalia. On the basis of color alone specimens of *ulmeri* can be recognized from Peru to Panama and Surinam. Another group is centered on *digramma* McLachlan (including *subaequalis* Banks). In this group, every specimen looks different from the next, but all could be the result of different degrees of development of the same basic pattern. The genitalia of the few males seen look identical and, in fact, are not clearly different from those of the *hyalinum* group. The *percitans* group (including the remainder of the Banks species) offer differences in the genitalia, especially the tenth tergum and aedeagus, often coupled with recognizable color differences. Yet the genitalia of *percitans* and *picteti* seem identical, although the coloration is quite different.

Banks has sketched (1924) the tips of the forewings showing the color pattern of *lachlani*, *burmeisteri*, *muelleri*, *pertyi*, *fraternum*, *hageni*, and *braueri*.

Macronema aeneum Hagen: See *Phylloicus aeneus* (Hagen).

Macronema chalybeum Hagen: See *Phylloicus chalybeus* (Hagen).

Macronema poeyi Banks: See *Leptonema poeyi* (Banks).

Macronema braueri Banks

Macronema braueri Banks, 1924, p. 454.—Fischer, 1963, p. 178.

This Brazilian species is known only from the female holotype.

Macronema burmeisteri Banks

Macronema burmeisteri Banks, 1924, p. 452.—Fischer, 1963, p. 178.

Lectotype, female: "Yurimaguas Peru 10 April Parish Coll," "Type 14836," "Macronema burmeisteri Bks. Type."

This species is known from the female sex.

Macronema erichsoni Banks

PLATE 1F

Macronema hyalinum Pictet, var.—Ulmer, 1913, p. 395.

Macronema erichsoni Banks, 1920, p. 356.—Mosely, 1931, p. 170.—Fischer, 1963, p. 184.

The photograph (pl. 1F) of the wings was made from a specimen identical to the female holotype in coloration. The species was

described from French Guiana and is also known from Brazil and Dutch Guiana.

Macronema fragilis Banks

FIGURES 41–43

Macronema fragilis Banks, 1915, p. 631.—Mosely, 1931, p. 170.—Fischer, 1963, p. 187.

The illustrations (figs. 41–43) of the genitalia were made from the male holotype. The species is known from British Guiana.

Macronema fraternum Banks

FIGURES 32–34; PLATE 1C

Macronema fraterna Banks, 1910, p. 159.—Ulmer, 1913, p. 408.—Banks, 1924, p. 453.—Mosely, 1931, p. 170.—Fischer, 1963, p. 187.

The holotype is a female from British Guiana. The photograph of the wings (pl. 1c) and figures 32–34 of the male genitalia are from a specimen carefully compared with the type. I have seen specimens from the Guianas and Ecuador.

Macronema gundlachi Banks

FIGURES 35–37

Macronema gundlachi Banks, 1924, p. 454.—Betten, 1934, p. 207.—Fischer, 1963, p. 187.

Lectotype, male: $\frac{\text{"89"}}{9}$, "Cuba Gundlach 1864," "Hagen," "Type 14875," "Macronema gundlachi Bks. Type."

The genitalia of the male lectotype are shown in figures 35–37.

Macronema hageni Banks

FIGURES 47–49; PLATE 1B

Macronema hageni Banks, 1924, p. 452.—Mosely, 1931, p. 170.—Fischer, 1963, p. 187.

Lectotype, male: "Tapajos Brazil 30 June Parish," "Type 14834," "Macronema hageni Bks. Type."

Figures 47–49 of the genitalia were made from the lectotype. The wing photograph (pl. 1B) is from a specimen carefully compared with the type.

Macronema lachlani Banks

FIGURES 44–46

Macronema lachlani Banks, 1924, p. 452.—Fischer, 1963, p. 189.

Figures 44–46 of the male genitalia were made from the male holotype. The species was described from Brazil.

Macronema muelleri Banks

FIGURES 38–40

Macronema mülleri Banks, 1924, p. 453.—Fischer, 1963, p. 191.

Lectotype, male: "Flores Brazil 6-XI Parish," "Type 14837." The genitalia of the lectotype male are shown in figures 38–40.

Macronema pertyi Banks

Macronema pertyi Banks, 1924, p. 451.—Fischer, 1963, p. 193.

The holotype is a female from Brazil.

Macronema picteti Banks

PLATE 1A

Macronema percitans Walker, var.—Ulmer, 1913, p. 395.
Macronema picteli [sic] Banks, 1915, p. 631.—Mosely, 1931, p. 170.—Fischer, 1963, p. 194.

The photograph (pl. 1A), which, unfortunately, does not show clearly the golden patch beyond the transverse white line, was made from a specimen carefully compared with the type. The male genitalia are identical to those shown by Betten and Mosely (1940, fig. 102) for *percitans* Walker. Yet, because the coloration seems quite different, I am not synonymizing the two here.

Macronema subaequalis Banks

FIGURES 50–52

Macronema subaequalis Banks, 1920, p. 355.
Pseudomacronema subaequalis (Banks).—Fischer, 1963, p. 163.

The genitalia of the male holotype of this Argentinian species are shown in figures 50–52.

Macronema ulmeri Banks

FIGURE 53; PLATE 1D

Macronema hyalinum Pictet, var.—Ulmer, 1907c, p. 76; 1913, p. 395.
Macronema ulmeri Banks, 1913b, p. 237.—Fischer, 1963, p. 199.

The holotype is a male from Colombia. The photograph of the wings (pl. 1D) and drawing of the male genitalia (fig. 53) were made from a specimen identical with the type.

Genus *Plectromacronema* Ulmer

(Genus *Podomacronema* Banks, new synonymy)

A study of the genitalia, wings and coloration of *subfuscum* Banks and *comptum* Ulmer, the type-species of *Plectromacronema*, convinces

me that the two are congeneric. I, therefore, synonymize *Podomacronema* Banks with *Plectromacronema* Ulmer (new synonymy).

Plectromacronema subfuscum (Banks), new combination

FIGURES 54–56; PLATE 1E

Podomacronema subfuscum Banks, 1920, p. 356.—Fischer, 1963, p. 164.

Figures 54–56 of the genitalia were made from the male holotype from Argentina. The wing photograph (pl. 1E) was made from a specimen identical with the holotype.

Genus *Podomacronema* Banks

Podomacronema subfuscum Banks: See *Plectromacronema subfuscum* (Banks).

Subfamily Hydropsychinae

Genus *Diplectrona* Westwood

Diplectrona unicolor Banks: See *Smicridea unicolor* (Banks).

Genus *Hydropsyche* Pictet

Hydropsyche ? bivittata Hagen: See *Smicridea bivittata* (Hagen).
Hydropsyche mexicana Banks: See *Polycentropus mexicanus* (Banks).

Hydropsyche calosa Banks

Hydropsyche calosa Banks, 1938, p. 300.—Flint, 1962, p. 23.—Fischer, 1963, p. 24.

Lectotype, male: "Cuba Ch. Wright," "M.C.Z. Type 22673," "Hydropsyche calosa Bks. Type."

The lectotype, male, was figured by Flint (1962).

Hydropsyche domingensis Banks

Hydropsyche domingensis Banks, 1941, p. 398.—Flint, 1962, p. 24.—Fischer, 1963, p. 28.

Lectotype, female: "Constanza to Jarabacoa Aug '38, Dom. Rep. 2–4,000 ft., Darl.," "M.C.Z. Type 25291."

The lectotype female was figured by Flint (1962).

Genus *Rhyacophylax* Muller

Rhyacophylax varius Banks: See *Smicridea varius* (Banks).

Genus *Smicridea* McLachlan

Smicridea maculata Banks: See *Smicridea albosignata* Ulmer.
Smicridea unicolor Banks: See *Smicridea banksi* Flint.

Smicridea aequalis Banks

FIGURES 74, 75

Smicridea aequalis Banks, 1920, p. 358.—Mosely, 1931, p. 170; 1933b, p. 220.—Fischer, 1963, p. 130.

Figures 74 and 75 of the male genitalia were made from the holotype. Although considerably rubbed, the type appears to have had a transverse white band from the stigma and another pale patch nearer the wing base.

Smicridea albosignata Ulmer

FIGURES 76, 77

Chimarrha ? maculata Hagen, 1861, p. 329. [Nomen nudum.]
Smicridea albosignata Ulmer, 1907a, p. 34; 1907b, p. 175; 1913, p. 390.—Mosely, 1933b, p. 216, 220.—Betten, 1934, p. 199.—Fischer, 1963, p. 131.
Smicridea maculata Banks, 1920, p. 359.—Mosely, 1933b, p. 220.—Fischer, 1963, p. 133. [New synonymy.]

The holotype of *maculata* was compared to a syntype of *albosignata* at the MCZ and found to be essentially identical. Figures 76 and 77 were prepared from a specimen carefully compared with the syntype. All examples are from Brazil.

Smicridea banksi Flint, new name

FIGURES 61–63

Smicridea unicolor Banks, 1938, p. 303.—Fischer, 1963, p. 135. [Preoccupied by *Smicridea unicolor* (Banks), 1901.]

Lectotype, male: "La Visite & vic. La Selle Range 5–7000 ft. Sept. 16–23," "Haiti 1934 M. Bates," "M.C.Z. Paratype 22110," "S. unicolor."

The male labelled "paratype" is selected as lectotype because its genitalia are undamaged. Figures 61–63 were prepared from this specimen. This species has a very faint transverse pale band from the stigma.

Smicridea bivittata (Hagen)

FIGURES 71–73

Hydropsyche bivittata Hagen, 1861, p. 291; 1864, p. 821.—Ulmer, 1905b, p. 68; 1907b, p. 171.—Ross, 1952, p. 33.
Smicridea bivittata (Hagen).—Ulmer, 1913, p. 390.—Betten, 1934, p. 199.—Fischer, 1963, p. 131.

The female lectotype, selected by Ross, was compared carefully with a female from a series containing males. This species is one of several with two narrow, white, transverse bands on the forewing. The species was described from Panama.

Smicridea comma Banks

FIGURES 59, 60

Smicridea comma Banks, 1924, p. 451.—Mosely, 1933b, p. 220.—Betten, 1934, p. 199.—Banks, 1941, p. 399.—Fischer, 1963, p. 132.

Lectotype, female: "1," "Cuba Poey 1864," "Hagen," "Type 14874," "Smicridea comma Bks. Type."

The type series contains only females. Figures 59 and 60 were prepared from a male identical with the type in maculation. The wings are brown with a white comma-shaped mark at the stigma and another transverse white band basad.

Smicridea completa Banks

FIGURES 64, 65

Smicridea completa Banks, 1941, p. 398.—Fischer, 1963, p. 132.

Lectotype, male: "Villa Altagracia July '38, Dom. Rep. Darlington," "M.C.Z. Type 25292," "Smicridea completa Bks. Type."

Figures 64 and 65 were prepared from the lectotype. This species bears on the forewing a transverse white band from the stigma and a diffuse band basad.

Smicridea nigripennis Banks

FIGURES 78–80

Smicridea nigripennis Banks, 1920, p. 359.—Mosely, 1933b, pp. 216, 220.—Fischer, 1963, p. 134.

Lectotype, male: "Caldras Columbia 4400 ft.," "N. Banks," "Type 10912," "Smicridea nigripennis Bks. Type."

The lectotype is a perfect match in color and male genitalia with the topotypic male shown here in figures 78–80.

Smicridea obesa Banks

FIGURES 57, 58

Smicridea obesa Banks, 1938, p. 303.—Fischer, 1963, p. 134.

Lectotype, male: "Pico Turquino June 16–21, 1936 6000 ft. (summit)," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22672," "Smicridea obesa Bks. Type."

Figures 57 and 58 were prepared from the lectotype. The specimen has immaculate wings, but an associated female bears an incomplete white transverse line from the stigma.

Smicridea unicolor (Banks)

FIGURES 66, 67

Diplectrona unicolor Banks, 1901, p. 370.—Ulmer, 1905b, p. 68; 1907b, p. 177; 1913, p. 407.—Betten, 1934, p. 183.—Fischer, 1963, p. 150.
Smicridea unicolor (Banks).—Ross, 1947, p. 144.

Lectotype, male: "type," "Cuernavaca June," "Collection N. Banks," "Type 11815," "Diplectrona unicolor Bks. type."

The lectotype is shown in figures 66 and 67; its wings are uniformly reddish brown.

Smicridea varius (Banks), new combination

FIGURES 68–70

Rhyacophylax varius Banks, 1913b, p. 239.—Lestage, 1925a, p. 41.—Betten, 1934, p. 199.—Fischer, 1963, p. 137.

The holotypic male agrees in maculation and genitalia with the male in figures 68–70. The species was described from Costa Rica.

HYDROPTILIDAE

Genus *Antillotrichia* Banks

Antillotrichia cubana Banks: See *Xiphocentron cubana* (Banks).
Antillotrichia haitiensis Banks: See *Xiphocentron haitiensis* (Banks).

LIMNEPHILIDAE

Genus *Algonquina* Banks

Algonquina chilensis Banks: See *Magellomyia appendiculata* (Ulmer).

Genus *Halesus* Stephens

Hallesus [sic] *solidus* Hagen: See *Limnephilus solidus* (Hagen).

Genus *Ironoquia* Banks

Ironoquia australis Banks: See *Magellomyia capillata* (Ulmer).

Genus *Limnephilus* Leach

Limnephilus discolor (Banks)

Platyphylax discolor Banks, 1901, p. 367.—Ulmer, 1905b, p. 21, 120; 1907b, p. 54; 1913, p. 410.—Betten, 1934, p. 352.

Limnephilus discolor (Banks).—Flint, 1963, p. 211.—Denning and Sykora, 1966, p. 1222.

The male holotype of this Mexican species was recently figured by Flint (1963) and the female by Denning and Sykora (1966).

Limnephilus solidus (Hagen)

Hallesus [sic] *solidus* Hagen, 1861, p. 267; 1864, p. 818.—Ulmer, 1905b, p. 21; 1907b, p. 56; 1913, p. 411.—Betten, 1934, p. 350.
Limnephilus solidus (Hagen).—Flint, 1963, p. 213.

The type of this species is not found in the Hagen material at the MCZ. It may well be found in the Zoologische Museum, Humboldt Universität, Berlin, where other types with the data "Mexico, Deppe" were found by Byers (1962).

Limnephilus toussainti Banks

Limnephilus toussianti [sic] Banks, 1924, p. 439.—Betten, 1934, p. 337.—Flint, 1963, p. 211.

The male holotype, figured by Flint (1963), is labelled as being from "Haiti." This is apparently in error as I now have seen examples collected in northwestern Mexico.

Genus *Magellomyia* Banks

Magellomyia moesta Banks: See *Magellomyia appendiculata* (Ulmer).

Magellomyia appendiculata (Ulmer)

Stenophylax appendiculatus Ulmer, 1904, p. 19; 1905b, p. 21; 1907b, p. 50.
Limnophilus appendiculatus (Ulmer).—Ulmer, 1913, p. 403.—Jorgensen, 1919, p. 398.
Magellomyia moesta Banks, 1920, p. 348.—Schmid, 1955, p. 54.
Algonquina chilensis Banks, 1920, p. 347. [New synonymy.]
Magellomyia appendiculata (Ulmer).—Schmid, 1955, p. 54; 1957, p. 389; 1958, p. 205; 1964, p. 323.—Flint, 1967, p. 58.
Magellomyia chilensis (Banks).—Schmid, 1955, p. 54.

The male holotype of *moesta* was studied by Schmid, who synonymized the name with *appendiculata*. I also am synonymizing here *A. chilensis* Banks, whose holotype is an absolutely typical female of *appendiculata*. The male genitalia were illustrated by Flint (1967).

Magellomyia capillata (Ulmer)

Limnophilus capillatus Ulmer, 1906, p. 11; 1907b, p. 45; 1913, p. 410.—Jorgensen, 1919, p. 398.
Ironoquia australis Banks, 1920, p. 347.—Schmid, 1955, p. 53.
Magellomyia capillata (Ulmer).—Schmid, 1955, p. 53; 1957, p. 388; 1964, p. 324.

Lectotype, male: "Chile Fairm.," "Hagen," "Type 10868," "L. capillatus Ulm. ♂ F. Schmid 1951."

The lectotypic male was studied by Schmid, who recognized the above synonymy and figured the species (1955).

Genus *Platyphylax* McLachlan

Platyphylax discolor Banks: See *Limnephilus discolor* (Banks).

Calamoceratidae

Genus *Heteroplectron* McLachlan

Heteroplectron maculatum Banks: See *Phylloicus maculatus* (Banks).
Heteroplectron nigripennis Banks: See *Phylloicus aeneus* (Hagen).
Heteroplectron mexicanum Banks: See *Phylloicus aeneus* (Hagen).

Genus *Phylloicus* Müller

(Genus *Notiomyia* Banks, new synonymy)

I am synonymizing here the genus *Notiomyia* with *Phylloicus*. The type-species of *Notiomyia, mexicana* (Banks), is clearly congeneric with *P. major* Müller, the type-species of *Phylloicus*. The species presently placed in *Notiomyia—mexicana* (Banks), *ornata* Banks, and *sagittosa* Ross—are all transfered to *Phylloicus* (all new combinations).

Phylloicus aeneus (Hagen)

Figures 90–92

Macronema aeneum Hagen, 1861, p. 285.—Ross, 1952, p. 34.
Anisocentropus aeneus (Hagen).—Hagen, 1864, p. 804.—Kolbe, 1888, p. 167.—Ulmer, 1905b, p. 30.
Heteroplectron nigripennis Banks, 1900, p. 256; 1901, p. 369.—Ulmer, 1905b, p. 30. [New synonymy.]
Heteroplectron mexicanum Banks, 1900, p. 257; 1901, p. 369.—Ulmer, 1905b, p. 30. [New synonymy.]
Phylloicus aeneus (Hagen).—Ulmer, 1905c, p. 79; 1906, p. 58; 1907b, p. 120; 1913, p. 409.—Betten, 1934, p. 237.—Fischer, 1965, p. 20.
Notiomyia mexicana (Banks).—Banks, 1905, p. 18; 1907, p. 43.—Ulmer, 1907b, p. 121; 1913, p. 409.—Essig, 1926, p. 177.—Betten, 1934, p. 236.—Milne, 1936, p. 78.—Ross, 1944, p. 301.—Fischer, 1965, p. 19.
Phylloicus nigripennis (Banks).—Ulmer, 1907b, p. 210; 1913, pp. 398, 409.—Betten, 1934, p. 237.—Fischer, 1965, p. 23.
Notiomyia sagittosa Ross, 1951, p. 72.—Denning, 1964, p. 134. [New synonymy.]

This species is, as I am considering it here, quite variable in coloration, size, and details of structure of the genitalia. The types of *aeneus* and *nigripennis* are females whose abdomens I have cleared and compared side-by-side and found to be the same. In coloration, there is a form with the wing veins marked with golden hairs (*aeneus* and *sagittosa* types) and another with totally black hairs (*nigripennis*

and *mexicanus* types). I have taken several pairs in copula in which one sex is one form, the other the other form. The examples from the southern part of the range seem smaller and with more orange on the body (*aeneus*, *nigripennis*, and *sagittosa* types), while the more northern populations seem larger with only the pronotum and a mesal spot on the head orange (*mexicanus* type). The exact shape of the tenth tergum varies in every population I have studied.

Figures 90–92 of the male were prepared from an example with the data "Mexico, Sallé," which was probably part of the original series.

Phylloicus brevior Banks

FIGURES 97,98

Phylloicus brevior Banks, 1915, p. 632.—Lestage, 1925a, p. 44.—Mosely, 1931, p. 170.—Fischer, 1965, p. 21.

Figures 97, 98 were prepared from the male holotype from British Guiana.

Phylloicus cubanus Banks

FIGURES 81,82

Phylloicus cubanus Banks, 1924, p. 445.—Betten, 1934, p. 237.—Banks, 1938, p. 298; 1941, p. 397.—Fischer, 1965, p. 22.

Because the male holotype is lacking the cerci, figures 81 and 82 were prepared from another specimen identical with the type.

Phylloicus chalybeus (Hagen)

FIGURES 83,84

Macronema chalybeum Hagen, 1861, p. 285; 1864, p. 845.—Kolbe, 1888, p. 167.—Ulmer, 1905b, p. 32; 1905c, p. 83; 1907b, p. 164; 1907c, p. 64, 81; 1913, p. 408.—Ross, 1952, p. 34.
Anisocentropus chalybeus (Hagen).—Betten, 1934, p. 232.—Fischer, 1965, p. 3.
Phylloicus chalybeus (Hagen).—Banks, 1941, p. 397.

Ross designated the lectotype, which is shown in figures 83 and 84. The species is known from Cuba.

Phylloicus iridescens Banks

FIGURES 85,86

Phylloicus iridescens Banks, 1941, p. 397.—Fischer, 1965, p. 22.

Lectotype, male: "Constanza to V. Nuevo, Dom. Rep. Aug. '38, 3–7,000 ft. Darlington," "M.C.Z. Type 25297," "Phylloicus iridescens Bks. type."

Figures 85 and 86 were prepared from the lectotype.

***Phylloicus lituratus* Banks**

FIGURES 93,94

Phylloicus lituratus Banks, 1920, p. 350.—Lestage, 1925a, p. 42.—Fischer, 1965, p. 22.

The genitalia of the male holotype from Colombia are illustrated in figures 93 and 94.

***Phylloicus maculatus* (Banks), new combination**

FIGURE 89

Heteroplectron maculatum Banks, 1901, p. 369.—Ulmer, 1905b, p. 30; 1907b, p. 119; 1913, p. 409.—Banks, 1914, p. 150.—Betten, 1934, p. 233.—Fischer, 1965, p. 19.

The genitalia of the female holotype are shown in figure 89. The type is from Mexico.

***Phylloicus magnus* Banks**

FIGURES 95,96

Phylloicus magnus Banks, 1913b, p. 236.—Lestage, 1925a, p. 42.—Fischer, 1965, p. 22.

Figures 95 and 96 were prepared from the male holotype, which is from Colombia.

***Phylloicus superbus* Banks**

FIGURES 87,88

Phylloicus superbus Banks, 1938, p. 298; 1941, p. 397.—Fischer, 1965, p. 23.

Lectotype, male: "Pico Turquino N. side June 18–20, 1935 4500–6000 ft.," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22669," "Phylloicus superbus Bks. type."

Figures 87 and 88 were prepared from the lectotype.

ODONTOCERIDAE

Genus *Marilia* Müller

***Marilia fasciculata* Banks**

FIGURE 119

Marilia fasiculata Banks, 1913a, p. 86.—Fischer, 1965, p. 32.

Figure 119 was prepared from the male holotype from Brazil.

***Marilia gracilis* Banks**

FIGURES 110, 111

Marilia gracilis Banks, 1938, p. 297.—Fischer, 1965, p. 33.

Lectotype, male: "La Visite & Vic La Selle Range 5–7000 ft. Sept.

16–23," "Haiti 1934 M. Bates," "M.C.Z. Type 22107," "Marilia gracilis Bks. type."

Figures 110 and 111 were prepared from the lectotype.

Marilia gracilis nigrescens Banks

FIGURE 112

Marilia gracilis var. *nigrescens* Banks, 1941, p. 397.—Fischer, 1965, p. 33.

Lectotype, male: "Valle Nuevo S E Constanza Aug. '38, Dom. Rep. c. 7,000 ft., Darl.," "M.C.Z. Type 25298," "Marilia gracilis nigrescens Bks. type."

The clasper of the lectotype male is shown in figure 112.

Marilia mexicana (Banks), new combination

FIGURES 120, 121

Leptocerus mexicanus Banks, 1901, p. 368.—Ulmer, 1905b, p. 28; 1907b, p. 136; 1913, p. 410.—Betten, 1934, p. 263.
Athripsodes mexicanus (Banks).—Fischer, 1965, p. 211.

The genitalia of the female holotype from Mexico are illustrated in figures 120 and 121.

Marilia modesta Banks

FIGURES 117, 118

Marilia modesta Banks, 1913b, p. 235.—Fischer, 1965, p. 34.

The genitalia of the male holotype from Colombia are shown in figures 117 and 118.

Marilia scudderi Banks

FIGURES 113, 114

Marilia scudderi Banks, 1924, p. 446.—Betten, 1934, p. 242.—Fischer, 1965, p. 34.

Figures 113 and 114 were prepared from the male holotype. The species is known from the Isle of Pines near Cuba.

Marilia wrighti Banks

FIGURES 115, 116

Marilia wrighti Banks, 1924, p. 446.—Betten, 1934, p. 242.—Fischer, 1965, p. 35.

Lectotype, male: "Cuba. Ch. Wright," "Type 14873," "Marilia wrighti Bks. type."

Figures 115 and 116 were prepared from the lectotype.

LEPTOCERIDAE

Genus *Leptocella* Banks

Leptocella fenestrata Banks: See *Leptocella punctata* Ulmer.

Leptocella pulchella Banks: See *Leptocellodes pulchellus* (Banks).
Leptocella sparsa Banks: See *Leptocella flavofasciata* Ulmer.

Leptocella cubana Banks

FIGURE 99

Leptocella cubana Banks, 1938, p. 299.—Fischer, 1966, p. 53.

Lectotype, male: "Guineo(s) Cuba April," "M.C.Z. Type 22671," "Leptocella cubana Bks. type."

Figure 99 was made from the lectotype.

Leptocella diminuta Banks

FIGURE 102

Leptocella diminuta Banks, 1920, p. 353.—Mosely, 1931, p. 170.—Fischer, 1966, p. 54.

Lectotype, male: "Bartica Br. Guiana Dec.," "N. Banks," "Type 10900," "Leptocella diminuta Bks. type."

Figure 102 was prepared from the lectotype. The other specimens in the type series are another species of the genus. The eyes of the lectotype are extremely large.

Leptocella dorsalis Banks

FIGURE 100

Leptocella dorsalis Banks, 1901, p. 368.—Ulmer, 1905b, p. 28; 1907b, p. 138; 1913, p. 402, 410.—Betten, 1934, p. 267.—Fischer, 1966, p. 54.

The species was described from Mexico from a female holotype. Figure 100 of the male genitalia was prepared from a topotypic male. The eyes of the male of this species are very large, being separated by less than half their width ventrally.

Leptocella flavofasciata Ulmer

Leptocella flavofasciata Ulmer, 1907a, p. 18; 1907b, p. 138; 1913, p. 410.—Fischer, 1966, p. 55.—Flint, 1966, p. 9.
Leptocella sparsa Banks, 1920, p. 353.—Fischer, 1966, p. 60.—Flint, 1966, p. 9.

Lectotype, male: "Missiones Jørgensen I–11–1909," "N. Banks," "Type 10899," "Leptocella sparsa Bks. type."

The species was figured recently by Flint (1966).

Leptocella gracilis Banks

FIGURE 101; PLATE 1H

Leptocella gracilis Banks, 1901, p. 369.—Ulmer, 1905b, p. 29; 1907b, p. 138; 1913, p. 410.—Betten, 1934, p. 267.—Fischer, 1966, p. 51.

Figure 101 of the genitalia was prepared from the holotype from Mexico. The eyes of the male are separated ventrally by twice the diameter of the eye.

Leptocella pretiosella (Banks), new combination

Setodes pretiosella Banks, 1924, p. 447.—Fischer, 1966, p. 48.

The holotype, a female from Peru, is a member of the *L. pavida* group.

Leptocella punctata Ulmer

Leptocella punctata Ulmer, 1905c, p. 75; 1907b, p. 138; 1913, pp. 402, 410.—Fischer, 1966, p. 60.—Flint, 1966, p. 9.
Leptocella fenestrata Banks, 1913b, p. 237.—Betten, 1934, p. 267.—Fischer, 1966, p. 55.—Flint, 1966, p. 9.

The holotype male of *fenestrata* is from Panama. The species was illustrated by Flint in 1966.

Leptocella separata Banks

FIGURE 103; PLATE 1G

Leptocella separata Banks, 1920, p. 353.—Fischer, 1966, p. 60.

Lectotype, male: "No. 12," "Type 10898," "Leptocella separata Bks. type."

The lectotype is from Brazil from Fritz Müller and bears his "number 12." The illustrations (figs. 103, pl. 1G) are from a specimen compared with, and found identical to, the type.

Genus *Leptocellodes* Ulmer

Leptocellodes pulchellus (Banks)

FIGURES 104, 105

Leptocella pulchella Banks, 1910, p. 160.—Ulmer, 1913, p. 410.—Fischer, 1966, p. 60.
Leptocellodes pulchellus (Banks).—Ulmer, 1955, p. 499.

Figures 104 and 105 were prepared from the male holotype from Columbia.

Genus *Oecetina* Banks

Oecetina amazonica Banks: See *Oecetis amazonica* (Banks).
Oecetina antillana Banks: See *Oecetis inconspicua* (Walker).
Oecetina parishi Banks: See *Oecetis punctipennis* (Ulmer).
Oecetina peruviana Banks: See *Oecetis peruviana* (Banks).

Genus *Oecetis* McLachlan

Oecetis amazonica (Banks)

FIGURES 106, 107

Oecetina amazonica Banks, 1924, p. 447.
Oecetis amazonica (Banks).—Fischer, 1966, p. 109.

Lectotype, male: "Manaos, Amazonas Brazil, Mann Coll." "Type 14830," "Oecetina amazonica Bks. type."

The figures were prepared from the male lectotype.

Oecetis inconspicua (Walker)

Leptocerus inconspicuus Walker, 1852, p. 71.
Oecetis inconspicua (Walker).—Betten and Mosely, 1940, p. 67.—Fischer, 1966, p. 149.
Oecetina antillana Banks, 1938, p. 298. [New synonymy.]
Oecetis antillana (Banks).—Fischer, 1966, p. 109.

Lectotype, male: "Soledad, Cuba (Cienfuegos) Apr. 1936 23 Darlington," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22670," "Oecetina antillana Bks. type."

The lectotype appears identical with the type of *inconspicua* as figured by Betten and Mosely (1940). Fischer (1966) gives a complete bibliography of this common species.

Oecetis peruviana (Banks)

FIGURES 108, 109

Oecetina peruviana Banks, 1924, p. 446.
Oecetis peruviana (Banks).—Fischer, 1966, p. 139.

Lectotype, male: "Iquitos Peru 17 May Parish," "Type 14831," "Oecetina peruviana Bks. type."

Figures 108 and 109 were drawn from the lectotype.

Oecetis punctipennis (Ulmer)

Pseudosetodes punctipennis Ulmer, 1905c, p. 77; 1907b, p. 147; 1913, p. 410.—Fischer, 1966, p. 104.
Oecetina parishi Banks, 1915, p. 631.—Mosely, 1931, p. 170.
Oecetis parishi (Banks).—Fischer, 1966, p. 139.—Flint, 1966, p. 10.
Oecetis punctipennis (Ulmer).—Flint, 1966, p. 10.

The genitalia were figured by Flint recently (1966).

Genus *Setodes* Rambur

Setodes pretiosella Banks: See *Leptocella pretiosella* (Banks).

LEPIDOSTOMATIDAE

Genus *Eremopsyche* Banks

Eremopsyche frontalis Banks: See *Lepidostoma frontalis* (Banks).

Genus *Lepidostoma* Rambur

(Genus *Eremopsyche* Banks, new synonymy)

The type and only species of *Eremopsyche, frontalis* Banks, clearly belongs to the genus *Lepidostoma* as it is presently recognized by North

American workers. I, therefore, synonymize *Eremopsyche* with *Lepidostoma* (new synonymy).

Lepidostoma frontalis (Banks), new combination

FIGURES 124, 125

Eremopsyche frontalis Banks, 1901, p. 367.—Ulmer, 1907b, p. 110; 1913, p. 411.—Ross, 1946, p. 290.

Figures 124 and 125 of this Mexican species were prepared from the male holotype.

Lepidostoma mexicana (Banks)

FIGURES 126, 127

Olemira mexicana Banks, 1901, p. 367.—Ulmer, 1907b, p. 109; 1913, p. 411.
Lepidostoma mexicana (Banks).—Ross, 1946, p. 288.

Figures 126 and 127 were prepared from the female holotype, which is from Mexico.

Genus *Olemira* Banks

Olemira mexicana Banks: See *Lepidostoma mexicana* (Banks).

HELICOPSYCHIDAE

Genus *Helicopsyche* Siebold

Helicopsyche hageni Banks

FIGURES 122, 123

Helicopsyche hageni Banks, 1938, p. 296.

Lectotype, male: "Pico Turquino N. side June 18–20, 1936 4500–6000 ft.," "Cuba 1936 Darlington Collector," "M.C.Z. Type 22668," "Helicopsyche hageni Bks. type."

Figures 122 and 123 here given are those of the lectotype.

Helicopsyche haitiensis Banks

Helicopsyche haitiensis Banks, 1938, p. 296.—Ross, 1956b, p. 398.

Lectotype, male: "La Visite & vic. La Selle Range 5–7000 ft. Sept. 16–23," "Haiti 1934 M. Bates," "M.C.Z. Type 22106," "Helicopsyche haitiensis Bks. type."

The male genitalia were figured by Ross (1956b). The type agrees with the figures except that the apex of the clasper has a more prominent point than Ross's figure shows.

Helicopsyche lutea (Hagen)

Notidobia lutea Hagen, 1861, p. 271; 1864, p. 853.—McLachlan, 1876, p. 238.—Kolbe, 1888, p. 167.—Ross, 1952, p. 35.

Helicopsyche lutea (Hagen).—Ulmer, 1907c, p. 94; 1913, p. 411.—Betten, 1934, p. 418.

The lectotype, designated by Ross, is a female. I have a male from Santo Domingo that agrees with the type in size and coloration. It appears to be the same as the one recently described by Kingsolver from Cuba as *H. comosa;* however, until a series of this species containing both males and females is available, I hesitate to establish the synonymy.

Helicopsyche mexicana Banks

Helicopsyche mexicana Banks, 1901, p. 368.—Ulmer, 1907b, p. 94; 1913, p. 411.—Betten, 1934, p. 418.—Ross, 1944, p. 289.—Denning, 1964, p. 132.

Both Ross (1944) and Denning (1964) have figured the male genitalia of this species. It was described originally from a single male from Mexico.

Helicopsyche muelleri Banks

Helicopsyche mulleri [sic] Banks, 1920, p. 348.—Marlier, 1964, p. 15.
Helicopsyche turbida Navas, 1923, p. 200.—Schmid, 1949, p. 419.—Marlier, 1964, p. 15. [New synonymy.]
Helicopsyche angelae Marlier, 1964, p. 9. [New synonymy.]

Lectotype, male: "Santa Catharina Brazil no. 18 F. Müller," "Type 10906," "Helicopsyche mulleri Bks. type."

It is with some hesitation that I synonymize these three species. The male genitalia of the type of *mulleri* and the figures of the genitalia of the types of *turbida* (Schmid, 1949) and *angelae* (Marlier, 1964) are identical. Both of the latter species, however, are stated to lack the process from the sixth sternum, which is clearly present in *muelleri.* Perhaps the spines are broken off in the types of *turbida* and *angelae,* or the presence or absence of the process may vary from one part of the range to another.

Helicopsyche peruana Banks

Helicopsyche peruana Banks, 1920, p. 349.—Marlier, 1964, p. 15.
Helicopsyche woytkowskii Ross, 1956b, p. 398. [New synonymy.]

The figures (Ross, 1956b) of the type of *woytkowskii* are very similar to the holotype, male, of *peruana.* The only difference is that *peruana* has four small seta-bearing teeth along the dorsal margin that are not shown in Ross's figure. In spite of this, I believe the two are synonymous.

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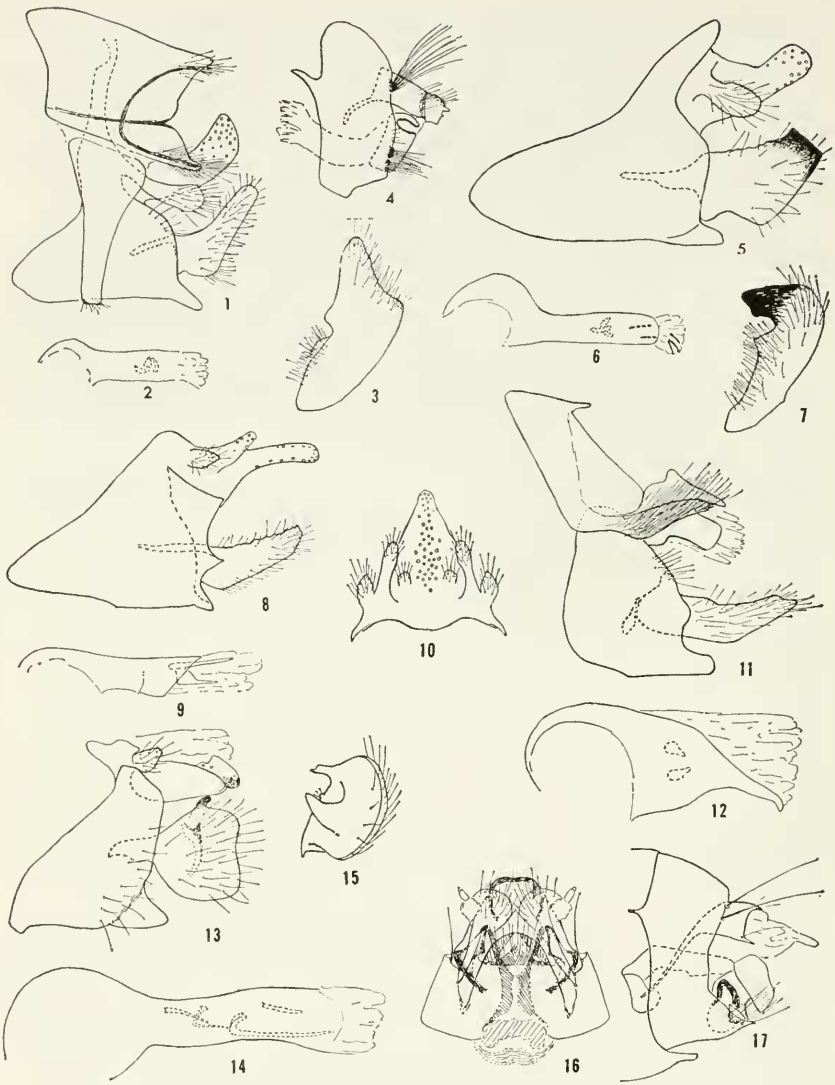
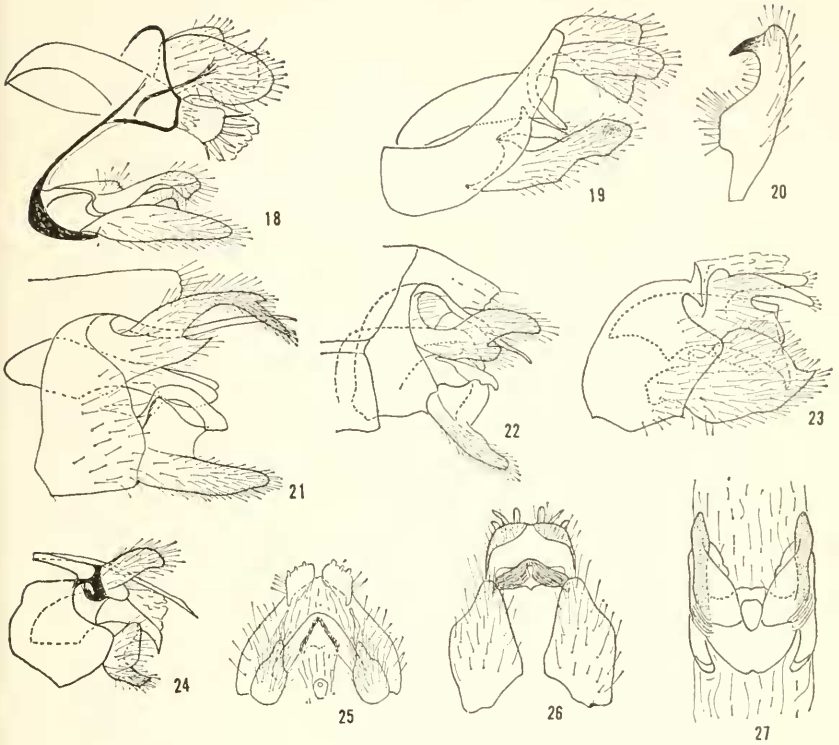
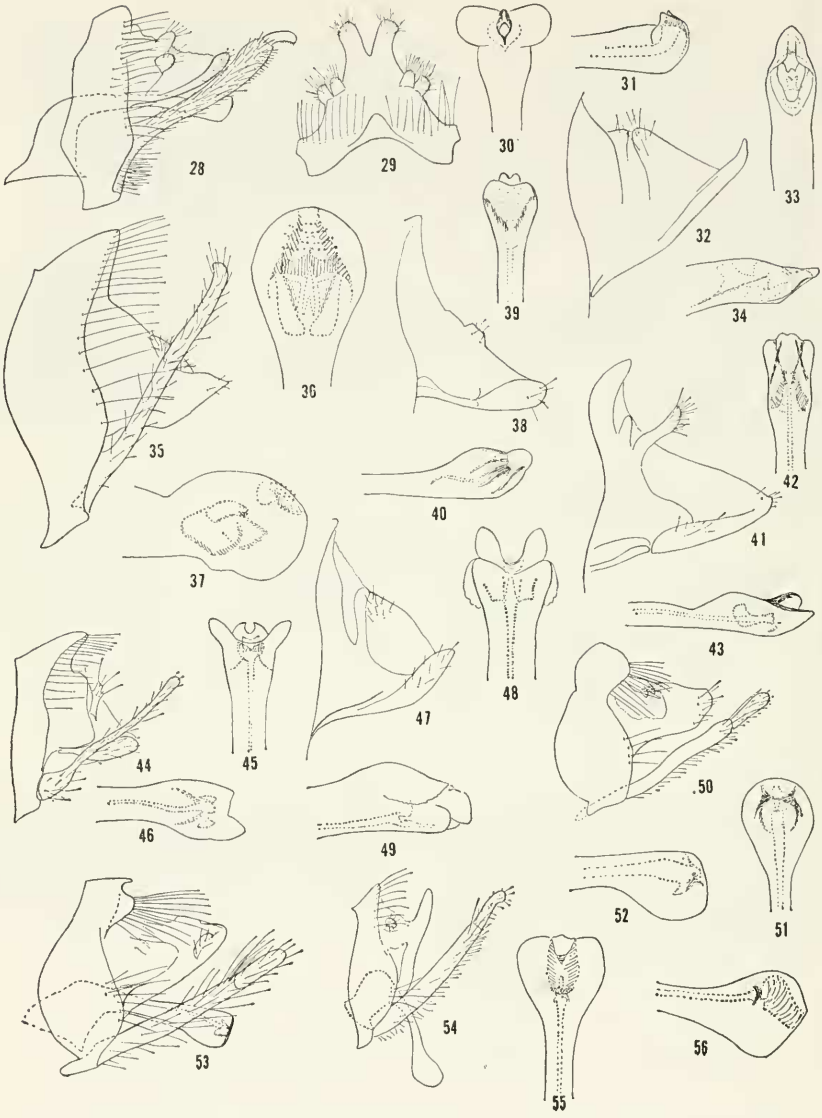


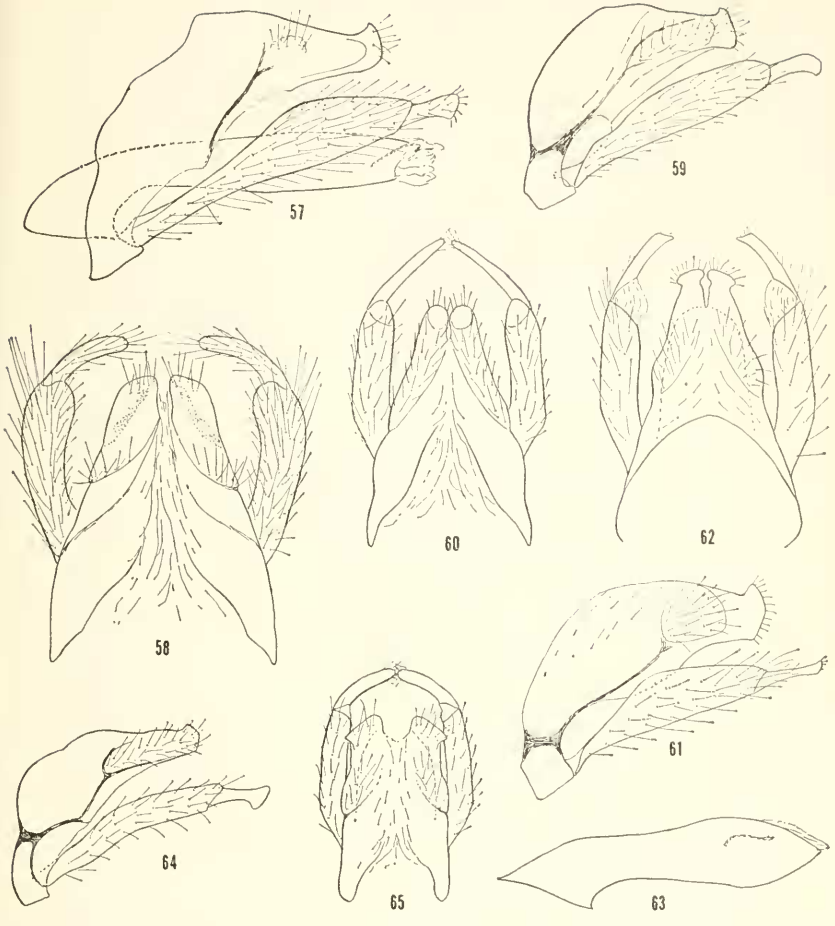
FIGURES 1–17.—*Chimarra banksi* (Ulm.): 1, genitalia, lateral; 2, aedeagus, lateral; 3, clasper, posteroventral. *C. mexicana* (Bks.): 4, female genitalia, lateral; 5, male genitalia, lateral; 6, aedeagus, lateral; 7, clasper posteroventral. *C. pulchra* (Hag.): 8, genitalia, lateral; 9, aedeagus, lateral; 10, tenth tergum, dorsal. *C. persimilis* (Bks.): 11, genitalia, lateral; 12, aedeagus, lateral. *C. bicolor* (Bks.): 13, genitalia, lateral; 14, aedeagus, lateral; 15, clasper, posterior. *C. moesta* (Bks.): 16, female genitalia, ventral. *C. pumila* (Bks.): 17, female genitalia, lateral.



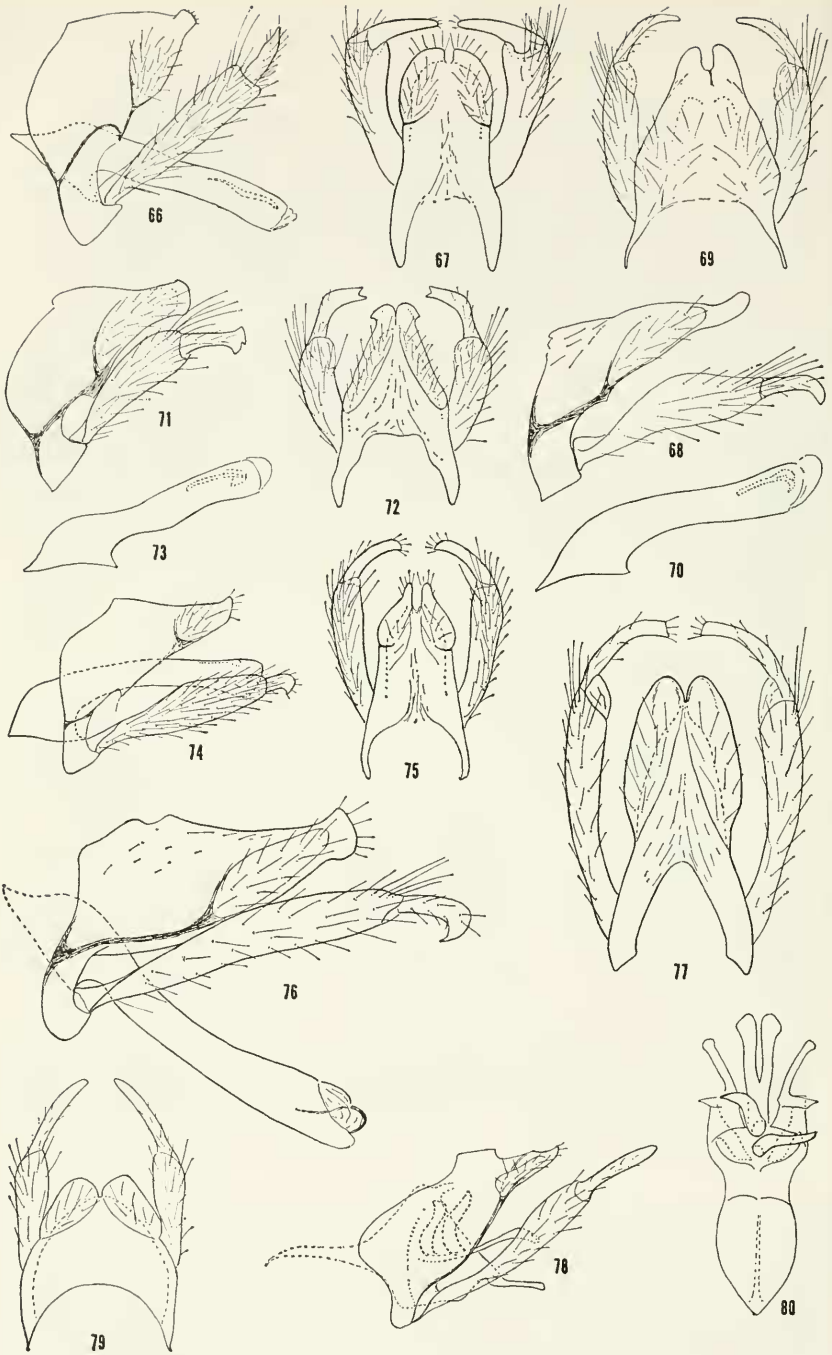
FIGURES 18–27.—*Antillopsyche wrighti* Bks.: 18, genitalia, lateral. *Crynellus minimus* Bks.: 19, genitalia, lateral; 20, clasper, ventral. *Polycentropus domingensis* Bks.: 21, genitalia, lateral. *P. nigriceps* Bks.: 22, genitalia, lateral. *P. mexicanus* (Bks.): 23, genitalia, lateral. *P. insularis* Bks.: 24, genitalia, lateral. *P. colombiensis* Bks.: 25, female genitalia, ventral. *Polyplectropus costalis* (Bks.): 26, female genitalia, ventral; 27, bursa copulatrix, ventral.



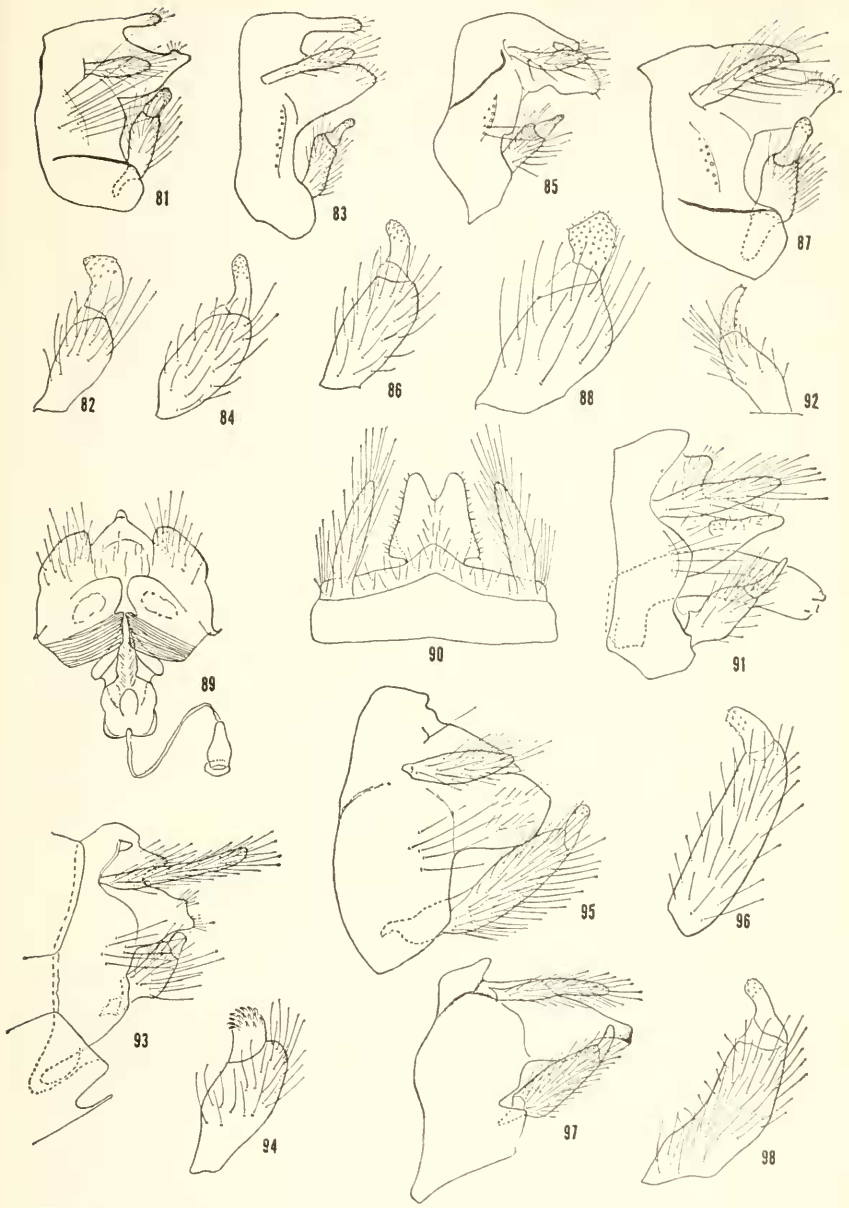
FIGURES 28–56. *Leptonema poeyi* (Bks.): 28, genitalia, lateral; 29, tenth tergum, dorsal; 30, tip of aedeagus, dorsal; 31, tip of aedeagus, lateral. *Macronema fraternum* Bks.: 32, tenth tergum, lateral; 33, tip of aedeagus, ventral; 34, tip of aedeagus, lateral. *M. gundlachi* Bks.: 35, genitalia, lateral; 36, tip of aedeagus, dorsal; 37, tip of aedeagus, lateral. *M. muelleri* Bks.: 38, tenth tergum, lateral; 39, tip of aedeagus, ventral; 40, tip of aedeagus, lateral. *M. fragilis* Bks.: 41, tenth tergum, lateral; 42, tip of aedeagus, ventral; 43, tip of aedeagus, lateral. *M. lachlani* Bks.: 44, genitalia, lateral; 45, tip of aedeagus, ventral; 46, tip of aedeagus, lateral. *M. hageni* Bks.: 47, tenth tergum, lateral; 48, tip of aedeagus, ventral; 49, tip of aedeagus, lateral. *M. subaequalis* Bks.: 50, genitalia, lateral; 51, tip of aedeagus, ventral; 52, tip of aedeagus, lateral. *M. ulmeri* Bks.: 53, genitalia, lateral. *Plectromacronema subfuscum* (Bks.): 54, genitalia, lateral; 55, tip of aedeagus, ventral; 56, tip of aedeagus, lateral.



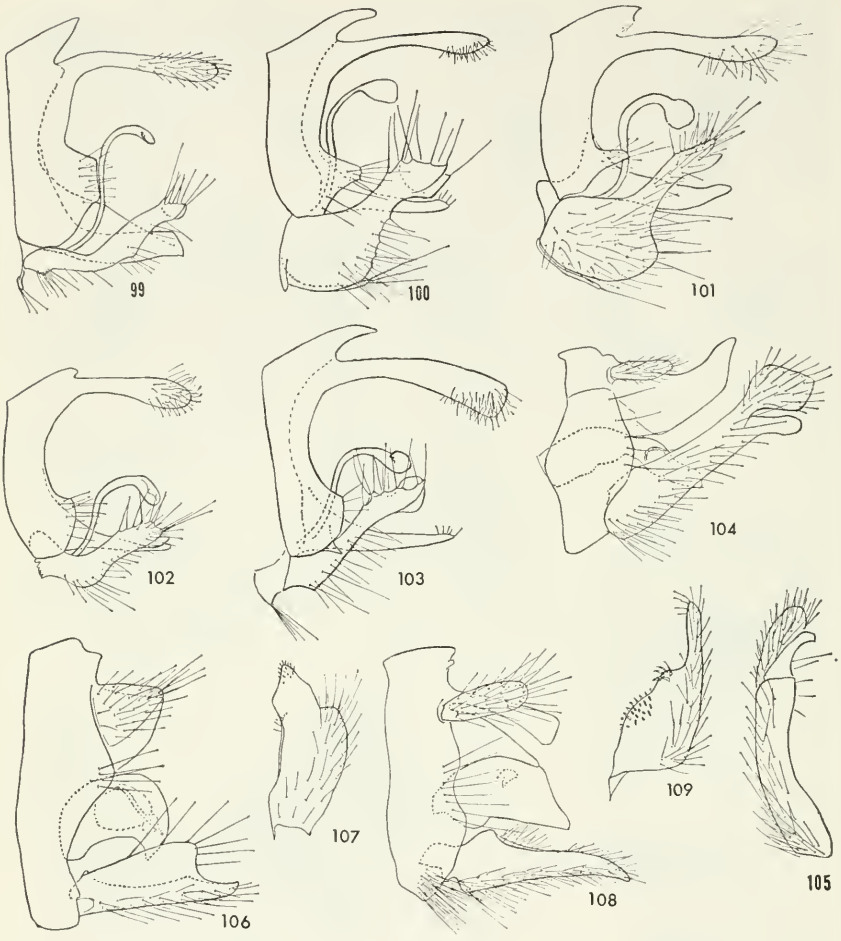
FIGURES 57–65.—*Smicridea obesa* Bks.: 57, genitalia, lateral; 58, genitalia, dorsal. *S. comma* Bks.: 59, genitalia, lateral; 60, genitalia, dorsal. *S. banksi* Flint: 61, genitalia, lateral; 62, genitalia, dorsal; 63, aedeagus, lateral. *S. completa* Bks.: 64, genitalia, lateral; 65, genitalia, dorsal.



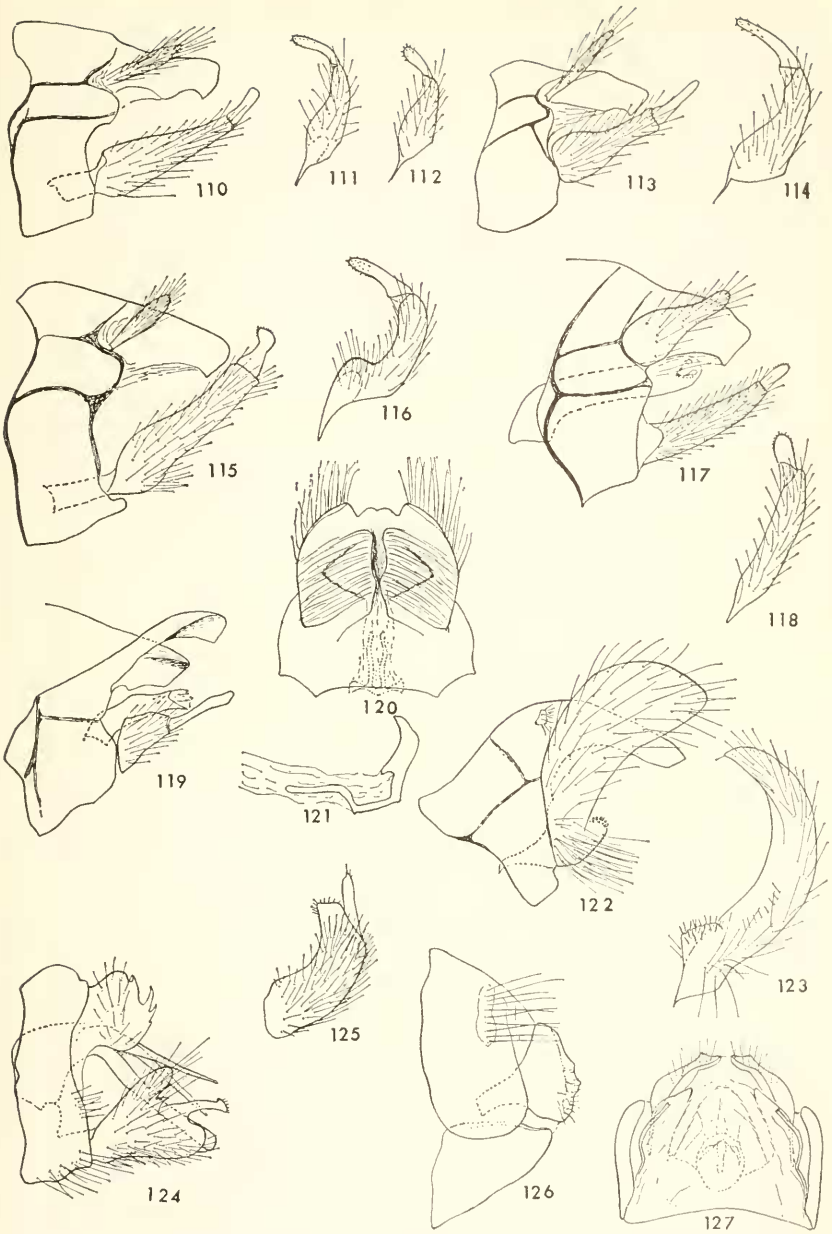
FIGURES 66–80.—*Smicridea unicolor* (Bks.): 66, genitalia, lateral; 67, genitalia, dorsal. *S. varius* (Bks): 68, genitalia, lateral; 69, genitalia, dorsal; 70, aedeagus, lateral. *S. bivittata* (Hag.): 71, genitalia, lateral; 72, genitalia, dorsal; 73, aedeagus, lateral. *S. aequalis* Bks.: 74, genitalia, lateral; 75, genitalia, dorsal. *S. albosignata* Ulm.: 76, genitalia, lateral; 77, genitalia, dorsal. *S. nigripennis* Bks.: 78, genitalia, lateral; 79, genitalia, dorsal; 80, aedeagus, dorsal.



FIGURES 81–98.—*Phylloicus cubanus* Bks.: 81, genitalia, lateral; 82, clasper, posterior, *P. chalybeus* (Hag.): 83, genitalia, lateral; 84, clasper, posterior. *P. iridescens* Bks.: 85. genitalia, lateral; 86, clasper, posterior. *P. superbus* Bks.: 87, genitalia, lateral; 88, clasper, posterior. *P. maculatus* (Bks.): 89, female genitalia, ventral. *P. aeneus* (Hag.): 90, genitalia, dorsal; 91, genitalia, lateral; 92, clasper, posterior. *P. lituratus* Bks.: 93, genitalia, lateral; 94, clasper, posterior. *P. magnus* Bks.: 95, genitalia, lateral; 96, clasper, posterior. *P. brevior* Bks.: 97, genitalia, lateral; 98, clasper, posterior.



FIGURES 99–109.—*Leptocella cubana* Bks.: 99, genitalia, lateral. *L. dorsalis* Bks.: 100, genitalia, lateral. *L. gracilis* Bks.: 101, genitalia, lateral. *L. diminuta* Bks.: 102, genitalia, lateral. *L. separata* Bks.: 103, genitalia, lateral. *Leptocellodes pulchellus* (Bks.): 104, genitalia, lateral; 105, clasper, posterior. *Oecetis amazonica* (Bks.): 106, genitalia, lateral; 107, clasper, ventral. *O. peruviana* (Bks.): 108, genitalia, lateral; 109, clasper, ventral.



FIGURES 110–127.—*Marilia gracilis* Bks: 110, genitalia, lateral; 111, clasper, posterior. *M. gracilis nigrescens* Bks.: 112, clasper, posterior. *M. scudderi* Bks.: 113, genitalia, lateral; 114, clasper, posterior. *M. wrighti* Bks.: 115, genitalia, lateral; 116, clasper, posterior. *M. modesta* Bks.: 117, genitalia, lateral; 118, clasper, posterior. *M. fasiculata* Bks.: 119, genitalia, lateral. *M. mexicana* (Bks.): 120, female genitalia, ventral; 121, bursa copulatrix, lateral. *Helicopsyche hageni* Bks.: 122, genitalia, lateral; 123, clasper, posterior. *Lepidostoma frontalis* (Bks.): 124, genitalia, lateral; 125, clasper, ventral. *L. mexicana* (Bks.): 126, female genitalia, lateral; 127, female genitalia, ventral.

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